

HOT SPOT

Hang on Tight—Stories, Parables, Occurrences, Training

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Could This Happen to You? Renal Disease

Renal Disease is a very complex disorder. Kidney failure occurs when the kidneys can no longer work normally. The kidneys remove waste products and excess fluids from the body. Complete kidney failure occurs when less than 10% of the kidneys are working. When someone has end stage renal disease (ESRD), the kidneys are damaged. When kidney failure progresses to the point where the kidneys do not function well enough to keep a person healthy, he or she will need treatment. A process called “dialysis” removes waste and fluid. A person may also be a candidate for a kidney transplant. Not all people with kidney failure are candidates for a transplant.

Kidney failure can happen suddenly or slowly. **Acute Kidney Failure** occurs when the kidneys suddenly stop working for some reason. Often this condition is temporary. The cause may be end stage renal disease, injury, or toxins in the system. Dialysis treatment supports the person while the kidneys recover. **Chronic Kidney Failure** occurs when the kidneys are slowly destroyed by disease. Eventually, dialysis treatment or a kidney transplant is needed for the person to stay healthy.

Several different conditions are known to cause kidney failure. However, for some people the cause is never known. The most common causes are diabetes (high blood sugar), and hypertension (high blood pressure). Other causes may be from lupus, glomerulonephritis, pyelonephritis, or polycystic kidney disease. People may not have any symptoms to tell them that their kidneys are not working well. As the kidney disease progresses, a person may feel sick sometimes. Complete kidney failure causes many changes in the body, and people feel some stronger symptoms. Symptoms vary from person to person.

One person may experience many of the symptoms that follow, but another person may not. When the kidneys first begin to fail, waste products will build up in the blood. The person may feel generally sick. Symptoms may include fatigue, nausea, vomiting, loss of appetite, itching, or have disturbed sleep. Extra fluids may build up in the body as the kidneys produce less urine. This is called edema. They may have swollen hands and ankles, gain fluid weight, or are short of breath doing activities such as walking or climbing a few stairs. The body will not

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MORTALITY ALERT!

Lithium. *COULD THIS HAPPEN TO YOU?*

Lithium, often sold under multiple brand names such as Eskalith, Lithobid, and Lithotabs, is a medication primarily used to treat bipolar disorder. The single most important use of lithium is in preventing new episodes of mania and depression. Lithium is being used experimentally to treat other mental illnesses such as schizophrenia.

Testing for lithium blood level is a vital part of treatment with lithium. Long term use may be related to thyroid and kidney problems. Renal and thyroid functions must be monitored every six months. Because an excess of lithium is toxic, individuals must be sure not to take more lithium than prescribed and must follow a strict schedule. **Lithium must be taken with care, with attention to taking proper dose, having regular blood tests, and reporting changes in diet, exercise, and occurrence of illness.**

Drug interactions may include, but are not necessarily all of the following. The use of thiazide diuretics, furosemide, spironolactone, methyldopa, indomethacin, phenylbutazone and piroxicam can increase lithium concentrations. NSAIDs (Tylenol, etc.) may increase the effects of lithium. Acetazolamide, sodium bicarbonate, sodium chloride,

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The HOT SPOT can be found on the web site for the State of Tennessee. Find it easily at www.state.tn.us/mental/publicate.html

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produce as many red blood cells when the kidneys are not working. This is called anemia. People with anemia may feel weak, cold, and tired. When the kidneys are not working to clean the blood, waste products called toxins will build up in the body. This may cause fatigue, loss of appetite, and make the skin feel itchy. Other symptoms may include: headache, diarrhea, increased thirst, decreased or increase in frequency of urination, drowsiness or confusion, trouble concentrating, puffiness around the eyes, decreased interest in sex, or feeling cold.

A number of different healthcare professionals specialize in treating persons with kidney disease. Blood and urine tests can tell how well someone's kidneys are working. Which doctor to see may depend on what caused the kidney disease. Other specialists may be seen including dietitians, endocrinologist, nephrologist, dialysis specialist, or transplant surgeon.

Today, there are new and better treatments for end-stage renal disease (ESRD). Work with the doctor to learn about treatment choices. The choices for treatment include hemodialysis, peritoneal dialysis and kidney transplantation.

Hemodialysis is a procedure that cleans and filters the blood. It rids the body of harmful wastes and extra salt and fluids. Hemodialysis uses a dialyzer, or special filter, to clean the blood. The dialyzer connects to a machine. An access must be made to the blood stream. The access can be internal (inside the body, usually under the skin), or external (outside the body). During treatment, the blood travels through tubes into the dialyzer where it is filtered. Then the cleaned blood flows through another set of tubes back into the body. Hemodialysis usually takes from 2-4 hours and is usually done three times a week. Hemodialysis and a proper diet help reduce the wastes that build up in the body. Follow planned meals according to the doctor's orders. Side effects can be caused by rapid changes in body fluid and chemical balance during treatment. Muscle cramps and hypotension are two common side effects. Hypotension, a sudden drop in blood pressure, can make a person feel weak, dizzy, or sick to their stomach.

Peritoneal dialysis is another procedure that replaces the work of the kidneys. It removes extra water, wastes, and chemicals from the body. This type of dialysis uses the lining of the abdomen to filter the blood. The lining is called the peritoneal membrane. Before the first treatment, a surgeon places a small, soft tube called a catheter into the abdomen. This catheter always stays there. It helps transport the dialysate to and from the peritoneal membrane. Dialysate is a cleansing solution. It travels through the special tube into the abdomen. Fluids, wastes and chemicals pass from tiny blood vessels in the peritoneal membrane into the dialysate. After several hours, the dialysate is drained from the abdomen, taking the wastes with it. Then the abdomen is filled with fresh dialysate and the cleaning process begins again. There are different types of peritoneal dialysis. Each process varies in

length, may or may not use a machine, and may be done daily, nightly, or several times a week. Diet for peritoneal dialysis is slightly different from the diet for hemodialysis. Follow the doctor's orders concerning diet. Peritonitis, or infection of the peritoneum, can occur if the opening where the catheter enters the body becomes infected. Peritonitis can make a person feel sick. It can cause a fever and stomach pain. The procedure must be followed exactly for connecting and disconnecting the catheter from the bags. Look for reddening or swelling around the catheter. Also, note if the dialysate looks cloudy. It is important to report these signs to the doctor.

Hemodialysis and peritoneal dialysis are treatments that try to replace the failed kidneys. These treatments help the person feel better and live longer, but they **are not cures** for ESRD. Both involve an amount of time that requires the person receiving the treatment to limit activity. The person must also cooperate with the treatment plan and not remove the catheter placed by the surgeon. These treatment plans may not be appropriate for some people with certain noncompliance, behavioral or contraindicated medical issues.

Kidney transplantation is a procedure that places a healthy kidney from another person into the body. The new kidney does all the work that the two failed kidneys cannot do. Not all people with kidney failure are candidates for a transplant. There are not enough donors for every person who needs a transplant. It takes time to get a kidney. There is a waiting list to receive a donor kidney. A panel to identify the best recipients must review individuals. It is important to update all medical information on transplant candidates to optimize their chances of being selected to receive a donor organ. This includes mental health diagnoses as well as physical health diagnoses. Once a suitable kidney is found, the surgery takes from 3 to 6 hours. The surgeon places the new kidney inside the body and connects the artery and vein of the new kidney. The new kidney soon begins to make urine. The usual hospital stay may last from 10 to 14 days. Regular follow-up visits are necessary. **Transplantation is not a cure.** There is always a chance that the body will reject the new kidney no matter how good the match. The chance of the body accepting the new kidney depends on age, race, and medical condition. Special drugs are needed to help prevent rejection. These drugs must be taken for the rest of the person's life. There are side effects of these medications. Sometimes these drugs cannot stop the body from rejecting the new kidney. If this happens, it will be necessary to return to some form of dialysis and possibly wait for another transplant. Diet is still of concern. Diet is usually less limited than it is for dialysis. Diet will change as medicines, blood values, weight, and blood pressure change.

It is not always easy to decide which type of treatment is best. The decision depends on medical condition, compliance, lifestyle, and personal likes and dislikes. Discuss the pros and cons of each treatment plan with the health care team. Together the person and the doctor will choose a suitable treatment.

MORTALITY ALERT!

Lithium. **COULD THIS HAPPEN TO YOU?**

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theophylline and mannitol can decrease lithium concentrations. Neurotoxicity may be increased by simultaneous use of haloperidol, phenothiazines, carbamazepine or phenytoin. Lithium may increase sensitivity to nicotine. **Clozapine may result in delirium or other serious condition; DO NOT combine.** Diazepam may cause hypothermia. Herbal remedies, vitamins, and over-the-counter medications must be discussed with the physician for possible drug interactions. Always follow the physician's recommendations on how to take medications.

DO NOT take MAO inhibitors with lithium as serious, even fatal, interactions can occur. ACE inhibitors such as Capoten may increase lithium levels as much as three times. Consult the physician and use extreme caution when these medication are taken together.

Lithium should not be given to an individual on a salt-free diet and sodium depletion must be carefully avoided. The individual is to maintain a normal diet and **do not restrict the use of salt.** Also, drink at least 8 to 12 glasses of water daily and limit intake of caffeinated beverages due to the diuretic nature of lithium.

Some individuals will experience side effects, and no one experiences side effects in exactly the same way. The individual and caregivers should notify the physician immediately if any adverse reactions should occur. Anyone with cardiovascular disease should be observed carefully for signs of arrhythmia. Geriatric individuals (usually over age 60) appear to be more susceptible to adverse effects even when lithium levels are therapeutic.

The following adverse effects have been reported usually related to serum lithium concentration:

(This is not to be considered a complete listing of adverse effects)

Gastrointestinal: anorexia, nausea, vomiting, diarrhea, thirst, dryness of the mouth, metallic taste, abdominal pain, weight gain or loss, persistent GI upset, gastritis, salivary gland swelling, excessive salivation, flatulence, indigestion.

Neurologic: general muscle weakness, ataxia (inability to coordinate muscular movements), tremor, muscle hyperirritability (twitching, especially of facial muscles and clonic movements of the limbs).

Central Nervous System: anesthesia of the skin, slurred speech, blurring of vision, blackout spells, headache, seizures, cranial nerve involvement, somnolence (sleepy), restlessness, stupor, and coma.

Cardiovascular: arrhythmia, hypotension, ECG changes, peripheral circulatory failure, cardiac collapse and death.

Genitourinary: albuminuria (albumin in the urine, indicating kidney disease), oliguria (too little urine), polyuria (too much urine).

Dermatologic: dryness and thinning of the hair, leg ulcers, skin rash, pruritus (severe itching).

Miscellaneous: general fatigue, dehydration, and peripheral edema.

Lithium toxicity is closely related to the concentration of lithium in the blood. The appearance or emphasis of the following symptoms has preceded lithium toxicity: sluggishness, drowsiness, lethargy, coarse hand tremor or muscle twitching, loss of appetite, vomiting, and diarrhea. Occurrence of these symptoms requires immediate and careful clinical reassessment and management.

Protecting Your Vision

The American Optometric Association (AOA) recommends that most people have an eye exam every one to two years depending on age and health. Since many diseases of the eye do not demonstrate early significant symptoms, an annual eye exam is one of the most important diagnostic and preventative measures a person can take to protect their vision and health. Individuals are often unaware that a problem exists. Early diagnosis and treatment are important for maintaining good vision and when possible preventing permanent vision loss.

The need for and frequency of optometric examinations vary with age, race, medical history, family history, occupation and other factors. Individuals with ocular signs or symptoms require prompt examination. In addition, the presence of certain risk factors may necessitate more frequent evaluations based on professional judgment. At risk are individuals diagnosed with diabetes or hypertension, or who have a family history of glaucoma or cataracts, and those taking systemic medications with ocular side effects or those with other health concerns or conditions. The following are the recommendations of the American Optometric Association for regular eye care.

Adults

During the adult years, the increased visual demands of our technological society bring about the need for regular optometric care. While the incidence of ocular disease is low for young adults, vocational and recreational visual demands are significant. To maintain visual efficiency, productivity, and optimum eye health, periodic examinations are recommended. Adults, beginning in their early to mid-forties, can experience changes in their ability to see clearly at close distances. This normal aging change in the eye's focusing ability will continue during the forties and fifties. In addition, increases in the incidence of eye health problems occur during these years. Therefore, periodic eye examinations are recommended.

Older Adults

Individuals age 61 or older have an increasing risk for the development of cataracts, glaucoma and macular degeneration and other sight threatening or visually disabling eye conditions as well as systemic health conditions. Therefore, annual eye examinations are recommended.



Where Can I Find the Best Source of Information Concerning My Medications?

Side effects of medications can be so dangerous that a drug is pulled from pharmacy shelves. Too frequently, new side effects of approved drugs are detected after a drug is placed on the market. This leads to significant changes in prescribing information, including the most serious "black box warnings". A black box warning is contained within a thick black square at the beginning of the information about that drug published in the Physicians' Desk Reference (PDR). It is also folded and inserted in every package of the drug. The black box warning might include potentially lethal drug interactions, toxicities, or other life-threatening side effects. A black box warning tells prescribers the most important safety information about a potentially dangerous drug. The warnings also influence some prescribers to look for safer alternatives.

It is important to remember that medication side effects can occur even after years of continuous use. Each time a medication is administered, the side effects are to be reviewed. Old drugs can have previously unreported side effects. No drug is safe under all conditions for every person. Question whether the information you read about medication is current. Throw away old and outdated drug reference books. Instead, rely on the Internet (e.g., www.fda.gov) or a hospital or pharmacy's drug information center for up-to-date information.

Clean Teeth and Gums

Having a clean mouth is important. When you eat, bits of food, some too small for you to see, remain in your mouth. They feed bacteria that grow in a sticky film on your teeth. This film, called plaque, is the main cause of tooth decay and gum disease.

Why brush? Brushing your teeth after meals and between-meal snacks gets rid of the food particles that you can see. It

removes plaque from your teeth. Using fluoride toothpaste is important because the fluoride can help kill bacteria, as well as make your teeth stronger. Ask your dentist to recommend the best toothbrush for you. The size and shape of the brush should allow you to reach every tooth. Remember: worn-out toothbrushes can not properly clean your teeth and may injure your gums. Toothbrushes should be replaced every three or four months.

Why floss? Flossing removes plaque and food particles from between teeth and under the gumline, areas your toothbrush can not reach. Because tooth decay and periodontal disease often start in these areas, it is important to clean them thoroughly on a daily basis. Flossing is a skill that needs to be learned. Do not be discouraged if you find it difficult at first. With practice, you will find that flossing takes only a few minutes of your time each day. Ask the dentist for assistance with a method that works for you.

How often should I see my dentist? If possible, you should visit your dentist every six months for a preventive check and cleaning.

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The Tennessee Department of Mental Health and Developmental Disabilities is committed to principles of equal opportunity, equal access and affirmative action. Contact the department's EEO/AA Coordinator at (615) 532-6580, the Title VI Coordinator at (615) 532-6700 or the ADA Coordinator at (615) 532-6700 for inquiries, complaints or further information. Persons with hearing impairment should call (615) 532-6612.



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